

### REMARKS

The Office Action dated June 27, 2006 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

By the above Amendment, Claims 1, 6, 8-17, 22, 24-33, 38, and 40 are pending in this application. Claims 1, 3-4, 6, 8-17, 19-20, 22, 24-33, 35-36, 38, and 40 stand rejected. Claims 3-4, 19-20, and 35-36 have been canceled.

As acknowledged in the Office Action, dependent Claims 6, 8, 22, 24, and 38 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In order to expedite prosecution, Applicant has added at least some of these limitations to the independent Claims. More specifically, the limitations of canceled Claims 2, 3, 4, and 5 have been added to Claim 1; the limitations of canceled Claims 18, 19, 20, and 21 have been added to Claim 17; and the limitations of canceled Claims 34, 35, 36, and 37 have been added to Claim 33.

The objection to Claim 8 for depending from a canceled claim is respectfully traversed. Applicant has amended Claim 8 to depend from Claim 1. Applicant respectfully requests withdrawal of this objection.

The rejection of Claims 1, 16, 17, 32, and 33 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,835,716 to Hunt et al. (hereinafter referred to as "Hunt") in view of Silver et al., Inventory Management and Production Planning and Scheduling, (hereinafter referred to as "Silver") is respectfully traversed.

Hunt describes a method for brokering carrier capacity. Hunt defines "carrier capacity" as the space that is available at any given time in a vehicle, which represents the carrier's mode of transport. Hunt provides a method for notifying shippers that a carrier has "excess capacity" in order to sell this additional space to the shippers.

The method described in Hunt allows two separate paths, a path for entering available carrier capacity and a path for requesting available carrier capacity. In each path, a user enters data relating to a plurality of parameters into a system's database. The system then determines whether there is a match in the database. All of the matches are displayed,

including the routes of the carrier and the rates for transporting the parcel. If a user selects a match, the selection is saved to a transaction database and assigned a transaction code.

Silver describes a “service point” method for delivering full-truckload quantities to buyers. The steps include computing an “Acceptable Shortages per Replenishment Cycle (ASPRC)” for a type of product and an “Expected Shortages per Replenishment Cycle (ESPRC)” for that product. If  $ESPRC > ASPRC$ , then the buyer should place an order of that product. Silver also describes allocating the truck capacity for all products that can be ordered, which involves assigning the truck capacity in proportion to the average demand of each product.

Claim 1 recites “a method of tracking and predicting the capacity utilization of a goods delivery system, the goods delivery system having at least one delivery agent and at least one delivery zone comprising a geographic area comprising at least one zip group having at least one zip code, each delivery agent having at least one delivery vehicle comprising a plurality of delivery vehicle slots, each delivery vehicle slot defined as a portion of one of the delivery vehicles used to deliver a good, the goods delivery system providing a respective first potential delivery date for approval by a buyer, a respective order, and the number of delivery vehicle slots the respective order will fill, said method of tracking and predicting the capacity utilization comprising the steps of: defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, the delivery agent capacity utilization matrix comprises a number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including a number of delivery vehicle slots for each zip group in the delivery zone, the total number of delivery vehicle slots in the zone defining a zone delivery capacity of the delivery agent; determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the respective delivery zone, the zone maximum number of delivery vehicle slots defined by the sum of the zone delivery capacity of each delivery agent in the delivery zone; determining whether the respective order can be shipped on the first potential ship date based on the number of available delivery vehicle slots, wherein said respective number of available delivery vehicle slots is equal to said respective zone maximum number of delivery vehicle slots minus said respective number of used delivery vehicle slots; returning a respective date that the respective order can be delivered based on

the number of available delivery vehicle slots on the respective date for approval by the buyer; updating the respective delivery agent capacity utilization matrix for the specified period after the respective order has been included within said respective number of used delivery vehicle slots; calculating a zone workload signal for the delivery date approved by the buyer, the zone workload signal corresponding to a new capacity value for the delivery date approved by the buyer, the new capacity value equals  $(\text{old capacity value} + (\text{number of filled slots})/(\text{zone maximum}))$ ; setting a capacity flag for each delivery date by comparing a sum of capacity values to a predetermined over capacity value for said delivery date, the sum of capacity values equals the sum of capacity values corresponding to a predetermined number of preceding delivery dates that immediately precede said delivery date, said setting a capacity flag comprising: setting an over capacity flag for said delivery date if the sum of capacity values is greater than or equal to a predetermined over capacity value for said delivery date; or setting an under capacity flag for said delivery date if the sum of capacity values is less than a predetermined over capacity value for said delivery date; and predicting the capacity utilization of the goods delivery system by determining whether the zone workload signal for a predetermined number of days is increasing or decreasing.”

Neither Hunt nor Silver, whether viewed alone or in combination, describes or suggests the method of tracking and predicting the capacity utilization of the goods delivery system as recited in Claim 1. More specifically, neither Hunt nor Silver, whether viewed alone or in combination, describes or suggests a method that includes calculating a zone workload signal for the delivery date approved by the buyer, where the zone workload signal corresponds to a new capacity value for that date, and the new capacity value equals  $(\text{old capacity value} + (\text{number of filled slots})/(\text{zone maximum}))$ , as required by Applicant’s claimed invention. Moreover, neither Hunt nor Silver, whether viewed alone or in combination, describes or suggests a method that includes setting a capacity flag for each delivery date by comparing a sum of capacity values to a predetermined over capacity value for said delivery date. Further, neither Hunt nor Silver, whether viewed alone or in combination, describes or suggests a method that includes predicting the capacity utilization of the goods delivery system by determining whether the zone workload signal for a predetermined number of days is increasing or decreasing.

Rather, Hunt merely describes a method for brokering excess carrier capacity where a carrier can notify shippers that the carrier has “excess capacity” in order to sell this additional space to the shippers. Hunt does not describe calculating a zone workload signal, setting a capacity flag for each delivery date, and/or predicting the capacity utilization of the goods delivery system as required by Applicant’s claimed invention. Further, Silver does not overcome the deficiencies of Hunt. Silver merely describes a “service point” method for predicting when to deliver full-truckloads to buyers.

For the reasons set forth above, Applicant respectfully submits that Claim 1 is patentable over Hunt in view of Silver.

Claim 16 depends from independent Claim 1. When the recitations of dependent Claim 16 are considered in combination with the recitations of Claim 1, Applicant respectfully submits that Claim 16 likewise is patentable over Hunt in view of Silver.

Claim 17 recites “[a] computer program storage medium readable by a computer system and encoding a computer program of instructions for executing a computer process for tracking and predicting the capacity utilization of the goods delivery system, the system having at least one delivery agent and at least one delivery zone comprising a geographic area comprising at least one zip group having at least one zip code, each delivery agent having at least one delivery vehicle comprising a plurality of delivery vehicle slots, each delivery vehicle slot defined as a portion of one of the delivery vehicles used to deliver a good, the goods delivery system providing a respective first potential delivery date for approval by a buyer, a respective order, and the number of delivery vehicle slots the respective order will fill, said computer process comprising the steps of: defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, the delivery agent capacity utilization matrix comprises a number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including a number of delivery vehicle slots for each zip group in the delivery zone, the total number of delivery vehicle slots in the zone defining a zone delivery capacity of the delivery agent; determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the respective delivery zone, the zone maximum number of delivery vehicle slots defined by the sum of the zone delivery capacity of each delivery agent in the delivery zone; determining whether the respective order can be shipped on the first

potential ship date based on the number of available delivery vehicle slots, wherein said respective number of available delivery vehicle slots is equal to said respective zone maximum number of delivery vehicle slots minus said respective number of used delivery vehicle slots; returning a respective date that the respective order can be delivered based on the number of available delivery vehicle slots on the respective date for approval by the buyer; updating the respective delivery agent capacity utilization matrix for the specified period after the respective order has been included within said respective number of used delivery vehicle slots; calculating a zone workload signal for the delivery date approved by the buyer, the zone workload signal corresponding to a new capacity value for the delivery date approved by the buyer, the new capacity value equals  $(\text{old capacity value} + (\text{number of filled slots})/(\text{zone maximum}))$ ; setting a capacity flag for each delivery date by comparing a sum of capacity values to a predetermined over capacity value for said delivery date, the sum of capacity values equals the sum of capacity values corresponding to a predetermined number of preceding delivery dates that immediately precede said delivery date, said setting a capacity flag comprising: setting an over capacity flag for said delivery date if the sum of capacity values is greater than or equal to a predetermined over capacity value for said delivery date; or setting an under capacity flag for said delivery date if the sum of capacity values is less than a predetermined over capacity value for said delivery date; and predicting the capacity utilization of the goods delivery system by determining whether the zone workload signal for a predetermined number of days is increasing or decreasing.”

Claim 17, as herein amended, recites a system comprising, among other things, a computer program storage medium readable by a computer system configured to perform steps essentially similar to those recited in Claim 1. Thus, for reasons that correspond to those given with respect to Claim 1, it is submitted that Claim 17 is patentable over the combination of Hunt and Silver.

Claim 32 depends from independent Claim 17. When the recitations of dependent Claim 32 are considered in combination with the recitations of Claim 17, Applicant respectfully submits that Claim 32 likewise is patentable over Hunt in view of Silver.

Claim 33 recites “[a] method of tracking and predicting the capacity utilization of a goods delivery system, the system having at least one delivery agent and at least one delivery zone comprising a geographic area comprising at least one zip group having at least one zip

code, each delivery agent having at least one delivery vehicle comprising a plurality of delivery vehicle slots, each delivery vehicle slot defined as a portion of one of the delivery vehicles used to deliver a good, the goods delivery system providing a respective first potential delivery date based on a selected potential ship date for approval by a buyer, a respective order, and the number of delivery vehicle slots the respective order will fill, said method of tracking and predicting the capacity utilization comprising the steps of: defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, the delivery agent capacity utilization matrix comprises a number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including a number of delivery vehicle slots for each zip group in the delivery zone, the total number of delivery vehicle slots in the zone defining a zone delivery capacity of the delivery agent; determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the respective delivery zone, the zone maximum number of delivery vehicle slots defined by the sum of the zone delivery capacity of each delivery agent in the delivery zone; determining whether the respective order can be shipped on each day of a set potential ship dates based on the number of available delivery vehicle slots, wherein said respective number of available delivery vehicle slots is equal to said respective zone maximum number of delivery vehicle slots minus said respective number of used delivery vehicle slots; wherein said set of potential ship dates includes the respective dates from the selected potential ship date to the first determined potential ship date; returning an indication of the respective dates that the respective order can be delivered within said set of potential ship dates based on the number of available delivery vehicle slots on the respective date for approval by the buyer; updating the respective delivery agent capacity utilization matrix for the specified period after the respective order has been included within said respective number of used delivery vehicle slots; calculating a zone workload signal for the delivery date approved by the buyer, the zone workload signal corresponding to a new capacity value for the delivery date approved by the buyer, the new capacity value equals  $(\text{old capacity value} + (\text{number of filled slots})/(\text{zone maximum}))$ ; setting a capacity flag for each delivery date by comparing a sum of capacity values to a predetermined over capacity value for said delivery date, the sum of capacity values equals the sum of capacity values corresponding to a predetermined number of preceding delivery dates that immediately precede said delivery date, said setting a capacity flag comprising: setting an over capacity flag for said delivery date if the sum of capacity values is greater

than or equal to a predetermined over capacity value for said delivery date; or setting an under capacity flag for said delivery date if the sum of capacity values is less than a predetermined over capacity value for said delivery date; and predicting the capacity utilization of the goods delivery system by determining whether the zone workload signal for a predetermined number of days is increasing or decreasing.”

Claim 33, as herein amended, recites a method of tracking and predicting the capacity utilization of the goods delivery system that performs steps essentially similar to those recited in Claim 1. Thus, for reasons that correspond to those given with respect to Claim 1, it is submitted that Claim 33 is patentable over the combination of Hunt and Silver.

For the reasons set forth above, Applicant respectfully requests that the Section 103(a) rejection of Claims 1, 16, 17, 32, and 33 be withdrawn.

The rejection of Claims 3-4, 9-15, 19-20, 25-31, and 35-36 under 35 U.S.C. § 103(a) as being unpatentable over Hunt in view of Silver and in further view of U.S. Patent No. 5,983,198 to Mowery et al. (hereinafter referred to as “Mowery”) is respectfully traversed.

Hunt and Silver are described above. Mowery describes an inventory control method that monitors product level in customer storage tanks and a delivery scheduling method that utilizes the monitored tank level data. The timing of the delivery is determined by the forecasted usage of material in the tank; the available capacities of neighboring tanks; that a delivery can be made whenever the tank level is in the “delivery zone” (i.e., the amount of material is between the minimum inventory level and the maximum order level); and that a delivery will be made before the tank level reaches the minimum inventory level. The amount of delivery is determined by the available tank capacity; minimum delivery amount for the tank; the maximum delivery amount for the tank; and the available capacities of neighboring tanks. In addition, Mowery describes historical/forecasting software that compares the historical usage with previous patterns, and automatically notifies customers of these variations.

Claims 3-4, and 9-15 depend from independent Claim 1. Claim 1 has been recited above.

As discussed above, neither Hunt nor Silver, whether viewed alone or in combination, describes or suggests the method of tracking and predicting the capacity utilization of the goods delivery system as required by Applicant's claimed invention. Further, Mowery does not overcome the deficiencies of Hunt and/or Silver. Mowery merely describes a method that is directed to monitoring the customer tanks that receive the delivery of chemicals and developing delivery schedules from the amount of material the customer has in inventory.

For the reasons set forth above, Applicant respectfully submits that Claim 1 is patentable over Hunt in view of Silver and in further view of Mowery.

Claims 3-4 have been canceled. When the recitations of dependent Claims 9-15 are considered in combination with the recitations of Claim 1, Applicant respectfully submits that Claims 9-15 likewise are patentable over Hunt in view of Silver and further in view of Mowery.

Claims 19-20 and 25-31 depend from independent Claim 17. Claim 17 has been recited above.

Claim 17, as herein amended, recites a system comprising, among other things, a computer program storage medium readable by a computer system configured to perform steps essentially similar to those recited in Claim 1. Thus, for reasons that correspond to those given with respect to Claim 1, it is submitted that Claim 17 is patentable over the combination of Hunt, Silver, and Mowery.

For the reasons set forth above, Applicant respectfully submits that Claim 17 is patentable over Hunt in view of Silver and in further view of Mowery.

Claims 19-20 have been canceled. When the recitations of dependent Claims 25-31 are considered in combination with the recitations of Claim 17, Applicant respectfully submits that Claims 25-31 likewise are patentable over Hunt in view of Silver and further in view of Mowery.

Claims 35-36 have been canceled. Thus, the rejection as it pertains to Claims 35-36 is moot.



Accordingly, for the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 3-4, 9-15, 19-20, 25-31, and 35-36 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



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